

CLAIMS

1. A method of transmitting data between a transmitter (10) and a receiver (20), comprising the steps of:

transmitting, by the transmitter, a data packet onto multiple paths
5 (13 – 18) of a network (5) between the transmitter and the receiver, at least one of the paths including at least one repeater transceiver node (30, 40);

issuing a NACK signal over the network, by the receiver (20), in the event that the data packet is not properly received; and

10 retransmitting the data packet onto the network by at least one of the repeater nodes (30, 40) upon receipt of the NACK signal.

2. The method of claim 1 in which the retransmitting step is effected by all repeater nodes that forwarded the data packet and that receive the
15 NACK signal.

3. The method of claim 1 in which the retransmitting step is effected by at least one of the repeater nodes (30, 40) and the transmitter (10).

20 4. The method of claim 1 in which the transmitter (10) does not retransmit the original data packet in the event of the issuing of a NACK signal by the receiver.

5. The method of claim 4 in which the transmitter (10) does not listen
25 for NACK signals relating to its own transmitted data packets.

6. The method of claim 1 in which the step of retransmitting the data packets onto the network (5) by the at least one repeater node (30, 40) includes the step of using multiple paths available from the repeater node
30 to the receiver.

7. The method of claim 1 further including the step of the receiver (20) issuing an ACK signal in the event that the data packet is correctly received, the at least one repeater node (30, 40) forwarding the ACK signal to the transmitter (10).

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8. The method of claim 1 further including the step of retransmitting the data packet, by the repeater node (30, 40), after a first predetermined retransmittal interval if no ACK or NACK signal is received in respect of a forwarded data packet.

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9. The method of claim 8 further including the transmitter (10) retransmitting the data packet step after a second predetermined retransmittal interval if no ACK signal is received, the second predetermined retransmittal interval being greater than the first predetermined retransmittal interval.

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10. A repeater node (30, 40) for forwarding data packets, received from a transmitter node (10), to a receiver node (20) that is the end destination of the packet, in a network (5), comprising:

20 a receive module (61) for receiving data packets originating from the transmitter;

a transmit module (62) for forwarding the data packet to another node in the network;

a pending packet buffer for storing forwarded data packets; and

25 retransmission means for retransmitting over the network previously forwarded data packets for which NACK signals are received.

11. The repeater node of claim 10 further including purge means for removing a stored data packet from the pending packet buffer when an
30 ACK signal received in respect of that data packet.

12. The repeater node of claim 10 in which the retransmission means includes means for retransmitting the data packet over all available paths.

13. The repeater node of claim 10 adapted to forward ACK signals to the transmitter but not to forward NACK signals to the transmitter.

14. The repeater node of claim 10 in which the retransmission means further includes means for retransmitting the data packet after a first predetermined retransmittal interval when no corresponding ACK or NACK signal is received.

15. A network of communicating nodes including a transmitter (10), a receiver (20) and at least one repeater (30, 40) for forwarding data packets, received from a transmitter node (10), to the receiver node (20) that is the end destination of the packet, comprising:

a receive module (61) in the repeater node for receiving data packets originating from the transmitter;

a transmit module (62) in the repeater node for forwarding the data packet to another node in the network;

a pending packet buffer (63) in the repeater node for storing forwarded data packets; and

retransmission means in the repeater node (30, 40) for retransmitting, over the network (5), previously forwarded data packets for which NACK signals are received.

16. The network of claim 15 in which the retransmission means, in the repeater node (30, 40), further includes means for retransmitting the data packet after a first predetermined retransmittal interval when no corresponding ACK or NACK signal is received.

17. The network of claim 16 further including second retransmission means, in the transmitter (10), for retransmitting the data packet after a

second predetermined retransmittal interval longer than the first retransmittal interval, when no corresponding ACK or NACK signal is received.